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APPEAL BRIEF

This Brief supports the appeal to the Board of Patent Appeals and Interferences from the final Office action dated April 24, 2008, in the application identified above. Applicants' filed the Notice of Appeal on October 24, 2008, together with a Pre-Appeal Brief Request for Review. A Notice of Panel Decision from Pre-Appeal Brief Review was issued on December 17, 2008 stating that the application remains under appeal and that Applicants are required to submit an appeal brief. Accordingly, Applicants now submit this Brief as required by 37 C.F.R. § 41.37(a). This Brief addresses the issues raised in the final Office action dated April 24, 2008.

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I. REAL PARTY IN INTEREST

The real party in interest is SiRF Technology, Inc., assignee named in that certain Assignment recorded August 1, 2005 at Frame 016603, Reel 0526.

II. RELATED APPEALS AND INTERFERENCES

There are no prior or pending appeals, judicial proceedings or interferences known to the Applicants that may be related to, directly effect or be directly effected by or have a bearing on the Board of Patent Appeals and Interference's decision in the pending appeal.

III. STATUS OF CLAIMS

This is an appeal from the April 24, 2008 final Office action, in which pending claims 1-6, 14-17, and 25 were rejected under 35 U.S.C. § 102(e), claims 7-13, 18-24, and 26 having been withdrawn in response to an earlier election/restriction requirement. Applicants are appealing the rejection of claims 1-6, 14-17, and 25.

IV. STATUS OF AMENDMENTS

Amendments were filed in a Response to the final Office action dated April 24, 2008. In an Advisory Action mailed July 10, 2008, it is stated that for the purposes of appeal, the proposed amendments will be entered. Accordingly, these amendments are reflected in the attached Claims - Appendix.

V. SUMMARY OF CLAIMED SUBJECT MATTER

A Global Positioning System ("GPS") receives signals from a network of earth-orbiting satellites and uses these signals to determine the position of a ground-based GPS receiver. When the GPS receiver is first turned on or woken up from a long stand-by condition, the GPS will scan the GPS spectrum to acquire GPS signals from available GPS satellites, which may take a significant amount of time, as measured by a Time-to-First-Fix ("TTFF") value, particularly in the case of reduced or totally blocked GPS signals.

In a wireless or mobile telephone application, where a GPS receiver is integrated into a mobile (such as a cellular) telephone, aiding or assisting information may be used to aid in the positioning determination of the mobile telephone. In response to these problems, aiding approaches have been developed for mobile telephones that assist the GPS receiver by providing aiding data from a communication module (also known as a "call processor" or "CP") for such purposes as acquisition, location calculation, and/or sensitivity improvement. Unfortunately, these aiding approaches in wireless networks are typically cellular network and vendor specific, where aiding data are provided by Geolocation Server Stations located at the cellular network (*i.e.*, cellular platforms such as Time Division Multiple Access ("TDMA"), Global System for Mobile communication ("GSM"), Code Division Multiple Access ("CDMA"), *etc.*). As a result, the GPS receiver in the mobile telephone must typically be compatible with the Geolocation Server Station of that particular cellular network. However, Geolocation Server Stations throughout the U.S. and abroad utilize protocols that are not compatible with each other.

In general, the claimed invention discloses a method of providing aiding data produced according to a particular Geolocation Server Station protocol that is received at a call processor within a mobile device, to a GPS module of the mobile device after converting the aiding data to interface data that is transparent to the Geolocation Server Station protocol. In an example of operation, a mobile device may include a call processor, a GPS module, and a protocol independent interface that allows the GPS module to receive aiding data from a Geolocation Server Station without requiring the GPS module to utilize the same protocol utilized by the Geolocation Server Station.

Examples of the subject matter claimed in independent claims 1 and 25 include a method for processing protocol aiding data produced according to a Geolocation Server Station protocol, received at a call processor of a mobile device and converting the received protocol aiding data to interface data that is transparent to the Geolocation Server Station protocol, and then passing the transparent interface data to a GPS module of the mobile device.

Independent claim 1 recites a "method for processing, within a mobile device, protocol aiding data..." as described in paragraphs **[00046]** and **[00047]** with respect to FIG. 5. The protocol aiding data is produced according to a Geolocation Server Station **512** (FIG. 5) protocol and received at a call processor **520** (FIG. 5) with a GPS interface in the mobile device (*see specification* at, for example, paragraph **[00023]**, lines 1-4). Method claim 1 recites receiving the protocol aiding data at the GPS interface **524** (FIG. 5), converting the received protocol aiding data to interface data that is transparent to the Geolocation Server Station protocol (*see specification* at, for example, paragraph **[00048]**, lines 1-3), and passing the transparent interface data to a GPS module **524** (FIG. 5).

Dependent claim 2 depends from claim 1 and includes the additional feature of "packing the transparent interface data into a message format before passing the transparent interface data to the GPS module." In an example operation, protocol independent interface data ("PI2") data "is packed into the G message format via a GPS module air-interface assembler/dissemble (also known as a PI2 interface message handler) 612 before passing to GPS Module 604 via the signal path 628." Paragraph **[00056]**, lines 13-16, page 20. An example of a PI2 packet structure is shown at paragraphs **[00097]** and **[00099]**, page 33, in Table 1 and Table 2, respectively.

Independent claim 25 is similar to claim 1 in that it is also a method claim that recites a "method for processing, within a mobile device, protocol aiding data..." as described in paragraphs **[00046]** and **[00047]** with respect to FIG. 5. Method claim 25 recites receiving the protocol aiding data at the GPS interface **524** (FIG. 5), passing the transparent interface data to a GPS module **522** (FIG. 5), and converting the received

protocol aiding data to interface data that is transparent to the Geolocation Server Station protocol (*see specification* at, for example, paragraph **[00048]**, lines 1-3).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL.

Whether claims 1-6, 14-17, and 25 are anticipated under 35 U.S.C. § 102(e) by U.S. Patent No. 6,542,823 to *Garin et al.*, issued April 1, 2003, and entitled "Information Transfer in a Multi-Mode Global Positioning System Used with Wireless Networks" (hereinafter "*Garin*").

VII. ARGUMENT

A. Introduction

Claims 1-6, 14-17, and 25 are not anticipated by *Garin* because *Garin* fails to teach or suggest each and every element recited in each pending claim. "A claim is anticipated only if each and every element as set forth in the claims is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California,* 814 F.2d. 628, 631 (Fed. Cir. 1987). It is not enough, however, that the prior art reference "disclose all elements of the claim within the four corners of the document, but [it] must also disclose those elements 'arranged as in the claim'." *Net MoneyIN, Inc., v. VeriSign, Inc.,* No. 2007-1565 (Fed. Cir. October 20, 2008). *See also* MPEP § 2131. In the case of a method, a prior art reference "operating in a different way" is deficient under 35 U.S.C. § 102 because it does not disclose the elements of the claimed invention "arranged as in the claim." *Net MoneyIN, Inc.*, at page 16, citing *Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.*, 730 F.2d 1452 (Fed. Cir. 1984).

Specifically, in the methods for processing protocol aiding data found in independent claims 1 and 25, the step of converting protocol aiding data received at a call processor of a mobile device to interface data that is transparent to a Geolocation Server Station protocol of a network is not met by the reference cited.

Accordingly, the analysis below focuses on showing that *Garin* fails to teach the conversion of a protocol aiding data received at a call processor of a mobile device to interface data that is transparent to a Geolocation Server Station protocol of a network. Because these limitations are not disclosed or suggested in *Garin*, independent claims 1 and 25 are not anticipated by *Garin* and are therefore patentable under 35 U.S.C. § 102(e).

B. The *Garin* Reference

In general, *Garin* is related to a multi-mode Global Positioning System (GPS) system for use in a wireless network that operates in multiple modes of operation, such as a standalone mode, an autonomous mode, a "network aided" mode, and a "network

based" mode, where the GPS system switches between these modes of operation based on several variables. *Abstract* and col. 3: lines 51-53. These modes of operation, in general, are related to whether a wireless communications device in a wireless communications system receives position information from GPS satellites in a GPS satellite system or from the wireless communications system (*i.e.*, aiding data) or both (col. 3: lines 50-65), as well as receiving position information from outside the wireless communications system and the GPS satellite system (col. 7: lines 55-59).

As shown in FIG. 2 of *Garin*, communications are transferred between a call processing (CP) section **200** and a GPS section **202** of handset **104** over a serial communications link **204** and hardware lines **206** (col. 5: lines 24-33). These communications allow signals to be transferred from CP Section **222** to GPS Section **202** (col. 5: lines 29-33).

FIG. **3** illustrates an end-to-end system that includes a handset **104** that comprises a GPS receiver client **302** and a CP section **304** connected by an RS232 data link **306** (col. 5: lines 43-47). In FIG. 1, GPS signals **114** are received at the handset **104** that comprises a GPS receiver and if the GPS signals **114** are strong enough, the GPS receiver can compute the position of the wireless handset **104** (col. 4: lines 40-49). In the implementation of FIG. **3**, GPS signals **114** are also received by a series of reference receivers **310** that compute the position of the reference receivers and extract data from the GPS signals **114**. The extracted data is sent to a GPS data center **312**. When needed, the geolocation server **108** extracts data from the GPS data center **312** for use by the handset **104**, and transmits the needed or requested data to the handset **104** (col. 5: lines 54-62).

Thus, with different sources of position information, the systems of *Garin* can be operated in different modes depending on several variables (col. 6: lines 27-31). These modes of operation are described in greater detail in columns 6 through 11. The technology of the invention in *Garin* also accommodates a wide range of wireless communication platforms, including CDMA, TDMA, AMP, and even pager systems (col. 4: lines 29-31).

C. The Examiner has failed to make a *prima facie* case of anticipation.

In rejecting claims 1-6, 14-17, and 25 under 35 U.S.C. § 102(e), the Examiner failed to show how *Garin* teaches or discloses each and every element of these claims. In the April 4, 2008 final Office action, the Examiner's basis for finding claims 1-6, 14-17, and 25 anticipated by *Garin* is found on pages 2-4 of the final Office action.

In the final Office action (at pages 2-3), the Examiner states the basis for the rejection under 35 U.S.C. § 102(e) as follows:

> Regarding claims 1 and 25, Garin et al. teaches a method for processing, within a mobile device, protocol aiding data received at a call processor with a Global Positioning System ("GPS") interface, where the protocol aiding data is produced according to a Geolocation Server Station protocol (6542823, column 5, lines 4-21, the handset 104 comprises a call processor CP 200 for performing call processing to receive data from a geo-location server (108)), the method comprising: receiving, at the GPS interface, the protocol aiding data received at the call processor ('823, figure 2, GPS section 202 receives the data from the geolocation server via the base station 106), converting the received protocol aiding data to interface data that is transparent to the Geolocation Server Station protocol; and passing the interface data to a GPS module ('823, figure 2, the serial communication lines 204 is used to convert the received data from geo-location and passes it to the CP section 200).

In his Response to Arguments (page 4), the Examiner states that that "[t]he wireless handset includes all necessary components for receiving protocol aiding data as said above and converting the received protocol aiding data to interface data that is transparent to the Geolocation server station protocol." The Examiner refers to col. 4: lines 29-33 and FIG. 1 of *Garin*, for the proposition that the disclosure in *Garin* includes "wireless communication platforms including: CDMA, TDMA, AMP, and even pager system[s]." All that this stands for, however, is that the geolocation systems of *Garin* may be implemented utilizing various wireless communications systems that include the conventional mobile or cellular telephone platforms, and there is nothing in *Garin* related to a single mobile device able to utilize aiding data produced according to any number of particular Geolocation Server Station protocols.

As to the limitation of the step of converting received protocol aiding data to transparent interface data, the Examiner's basis for rejection, as set forth above, merely repeats the limitations of the rejected claims but fails to point with any degree of specificity which of the elements/features of *Garin* teach or suggest this limitation. An explanation of why *Garin* does not teach or suggest this limitation of the claimed invention is set forth in sections D and E below, as well as a response to the Examiner's Response to Arguments at page 4 of the final Office action.

D. *Garin* does not teach or suggest the step of converting protocol aiding data received at a call processor of a mobile device to interface data that is transparent to a Geolocation Server Station protocol of a network as recited in independent claims 1 and 25.

As stated in **Part V** above, independent claim 1 recites a "method for processing, within a mobile device, protocol aiding data..." as described in paragraphs **[00046]** and **[00047]** of the specification with respect to FIG. 5. The method of claim 1 includes receiving protocol aiding data at a GPS interface of a call processor of a mobile device, converting the received protocol aiding data to transparent interface data, and passing the transparent interface data to a GPS module of the mobile device.

In FIG. 5, a wireless mobile positioning system architecture is shown, where protocol aiding data may be produced according to a Geolocation Server Station **512** protocol and received at a call processor **520** of a mobile device **506** with a GPS interface **524** (*see specification* at, for example, paragraph **[00023]**, lines 1-4). The GPS Interface 524 is an interface that allows the GPS Module **522** to utilize the same protocol utilized by the Geolocation Server Station **512** (paragraph **[00047]**, lines 2-5). In operation, each Geolocation protocol may be implemented via a translator in the PI2 **524** that translates the Geolocation Server Station **512** protocol to an independent protocol used by the GPS module **522** (paragraph **[00048]**, lines 1-3).

As to this feature, *i.e.*, "converting the received protocol aiding data to interface data that is transparent to the Geolocation Server Station protocol," it is cited in the Examiner's statement quoted in Section C above, but there is no citation to where this feature may be found in *Garin*. In his Response to Arguments at page 4 of the final

Office action, the Examiner asserts that "[t]he wireless handset (of *Garin*) includes all necessary components for receiving protocol aiding data as said above and converting the received protocol aiding data to interface data that is transparent to the Geolocation server station protocol, ..."

This is incorrect for two reasons. First, in terms of components of a mobile or wireless device, the geolocation system of *Garin* does not teach or suggest a GPS interface or any other component or module where protocol aiding data is received and converted. Second, in terms of a method for processing protocol aiding data, there is nothing in *Garin* that teaches or suggests a step in a method for processing protocol aiding data whereby it is converted to transparent interface data. In fact, *Garin* is completely silent as to protocol aiding data except for the statement at col. 4: lines 29-33 referred to by the Examiner that merely states that the technology of *Garin* accommodates a "wide range of wireless communication platforms including: CDMA, TDMA, AMP, and even pager system[s]."

Accordingly, *Garin* does not anticipate claims 1 and 25 because *Garin* does not teach or suggest the step of converting protocol aiding data received at a call processor of a mobile device to interface data that is transparent to a Geolocation Server Station protocol of a network.

E. *Garin* does not teach or suggest the step of packing transparent interface data into a message format before passing the transparent interface data to a GPS module as recited in dependent claim 2.

As stated in **Part V** above, dependent claim 2 depends from claim 1 and includes the additional limitation of "packing the transparent interface data into a message format before passing the transparent interface data to the GPS module." In an example operation, protocol independent interface data ("PI2") data "is packed into the G message format via a GPS module air-interface assembler/dissemble (also known as a PI2 interface message handler) 612 before passing to GPS Module 604 via the signal path 628." Paragraph **[00056]**, lines 13-16, page 20. An example of a PI2 packet structure is shown at paragraphs **[00097]** and **[00099]**, page 33, in Table 1 and Table 2, respectively.

As to claim 2, the Examiner asserts (on page 3 of the final Office action) that the act of packing the interface data into a message format before passing the interface data to a GPS module is disclosed by the abstract of *Garin*. This is not the case in that as in the case of independent claims 1 and 25, there is nothing in *Garin* related to protocol aiding data being received and converted at a GPS interface, and this includes the limitation of packing interface data into a message format before passing the interface data to a GPS module.

Again, *Garin* does not anticipate dependent claim 2 because *Garin* does not teach or suggest the limitation of packing interface data into a message format before passing the interface data to a GPS module.

F. Summary

In summary, *Garin* does not teach or suggest the step of converting protocol aiding data received at a call processor of a mobile device to interface data that is transparent to a Geolocation Server Station protocol of a network. In general, the prior art reference (*Garin*) must disclose all elements of the rejected claims within the four corners of the document, and these elements must be arranged as in the rejected claims. In this case, the elements or limitation cited above are simply not found in *Garin*. Accordingly, the rejection of these claims under 35 U.S.C. § 102(e) based on *Garin* is improper.

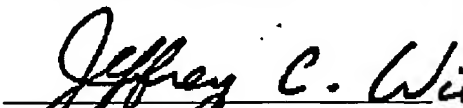
Additionally, dependent claim 2 includes the limitation of the additional step of packing transparent interface data into a message format before passing the transparent interface data to a GPS module that is also not found in the cited reference.

Independent claims 1 and 25 being in condition for allowance, dependent claims 2-6 and 14-17 that depend directly or indirectly from allowable independent claim 1 are also in condition for allowance for at least the same reasons.

VIII. CONCLUSION

In view of the above, claims 1-6, 14-17, and 25 are not anticipated by *Garin* because *Garin* fails to teach or disclose the step of converting protocol aiding data received at a call processor of a mobile device to interface data that is transparent to a Geolocation Server Station protocol of a network. Therefore reversal of the rejection of these claims and allowance of this patent application are earnestly solicited.

Respectfully submitted by
Attorney for Applicants



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IX. CLAIMS - APPENDIX

1. (previously presented): A method for processing, within a mobile device, protocol aiding data received at a call processor with a Global Positioning System ("GPS") interface where the protocol aiding data is produced according to a Geolocation Server Station protocol, the method comprising:

receiving, at the GPS interface, the protocol aiding data received at the call processor;

converting the received protocol aiding data to interface data that is transparent to the Geolocation Server Station protocol; and

passing the transparent interface data to a GPS module.

2. (previously presented): The method of claim 1, further including packing the transparent interface data into a message format before passing the transparent interface data to the GPS module.

3. (original): The method of claim 1, wherein the call processor receives the protocol aiding data from a base station.

4. (previously presented): The method of claim 3, wherein a Geolocation Server Station produces the protocol aiding data.

5. (original): The method of claim 4. wherein the Geolocation Server Station utilizes a Code Division Multiple Access ("CDMA") protocol to produce the protocol aiding data.

6. (original): The method of claim 5, wherein the protocol is IS-801.

7. (withdrawn): The method of claim 5, wherein the protocol is Universal Mobile Telecommunication System ("UMTS").

8. (withdrawn): The method of claim 5, wherein the protocol is CDMA 2000.

9. (withdrawn): The method of claim 4, wherein the Geolocation Server Station utilizes a Global System for Mobile Communication ("GSM") protocol to produce the protocol aiding data.

10. (withdrawn): The method of claim 4, wherein the Geolocation Server Station utilizes a General Packet Radio Service ("GPRS") protocol to produce the protocol aiding data.

11. (withdrawn): The method of claim 4, wherein the Geolocation Server Station utilizes a Time Division Multiple Access ("TDMA") protocol to produce the protocol aiding data.

12. (withdrawn): The method of claim 4, wherein the Geolocation Server Station utilizes a BlueTooth® protocol to produce the protocol aiding data.

13. (withdrawn): The method of claim 4, wherein the Geolocation Server Station utilizes an IEEE 802.11 protocol to produce the protocol aiding data.

14. (original): The method of claim 1, further including utilizing the protocol aiding data for GPS acquisition.

15. (original): The method of claim 1, further including utilizing the protocol aiding data for calculating the location of the mobile device.

16. (original): The method of claim 1, further including utilizing the protocol aiding data for improving the sensitivity of the GPS module.

17. (previously presented): The method of claim 1, wherein passing the transparent interface data to a GPS module includes passing the transparent interface data via a RS232 link.

18. (withdrawn): A protocol independent interface for processing, within a mobile device, protocol aiding data received at a call processor with a Global Positioning System ("GPS") interface, where the protocol aiding data is

produced according to a Geolocation Server Station protocol, the protocol independent interface comprising:

means for receiving, at the GPS interface, the protocol aiding data received at the call processor,

means for converting the received protocol aiding data to interface data that is transparent to the Geolocation Server Station protocol; and

means for passing the interface data to a GPS module.

19. (withdrawn): The protocol independent interface of claim 18, further including packing the interface data into a message format before passing the interface data to the GPS module.

20. (withdrawn): The protocol independent interface of claim 19, wherein the call processor receives the protocol aiding data from a base station.

21. (withdrawn): The protocol independent interface of claim 20, wherein a Geolocation Server Station produces the aiding data.

22. (withdrawn): The protocol independent interface of claim 21, wherein the Geolocation Server Station utilizes a Code Division Multiple Access ("CDMA") protocol to produce the protocol aiding data.

23. (withdrawn): The protocol independent interface of claim 22, wherein the

protocol is IS-801.

24. (withdrawn): A protocol independent interface for processing, within a mobile device, protocol aiding data received at a call processor where the protocol aiding data is produced according to a Geolocation Server Station protocol, the protocol independent interface comprising:

an air-interface protocol to GPS module interface converter,

a serial link in signal communication between the call processor and Global Positioning System ("GPS") module; and

a GPS module data structure.

25. (original): A method for processing, within a mobile device, protocol aiding data received at a call processor with a Global Positioning System ("GPS") interface, where the protocol aiding data is produced according to a Geolocation Server Station protocol, the method comprising:

receiving, at the GPS interface, the protocol aiding data received at the call processor, passing the interface data to a GPS module; and

converting the received protocol aiding data to interface data that is transparent to the Geolocation Server Station protocol.

26. (withdrawn): A protocol independent interface for processing, within a mobile device, protocol aiding data received at a call processor with a Global Positioning

System ("GPS") interface, where the protocol aiding data is produced according to a Geolocation Server Station protocol, the protocol independent interface comprising:

means for receiving, at the GPS interface, the protocol aiding data received at the call processor;

means for passing the interface data to a GPS module; and

means for converting the received protocol aiding data to interface data that is transparent to the Geolocation Server Station protocol.

X. EVIDENCE – APPENDIX

No Evidence Appendix is included.

XI. RELATED PROCEEDINGS – APPENDIX

None.